

Draft Falls

Definition: All unintentional fall-related deaths and hospitalizations. Fall hospitalizations for 1989 through 2004 and deaths for 1990 through 1998 include all death records with an ICD 9 code of E880-886, E888. For 1999 through 2004, the applicable ICD 10 codes include W00-19.

Washington State Goal Statement:

- Reduce the hospitalization rate for falls among adults age 65+ by 10% from 1,667 per 100,000 in 2004 (11,615 hospitalizations) to 1,500 per 100,000 by 2010.
- Reduce the death rate for falls by 10% from 8.8 per 100,000 population in 2004 (540 deaths) to 7.9 per 100,000 population by 2010.

National Healthy People 2010 Objectives:

1. Reduce deaths from unintentional falls from 4.6 deaths per 100,000 in 1999 to 2.9 deaths per 100,000. *In Washington in 2004, the unintentional fall death rate was 8.8 per 100,000.*
2. Reduce rate of hip fracture among older adults. Reduce hip fracture among females aged 65 years and older from 1518 per 100,000 in 1999 to 1214 per 100,000. Reduce hip fracture among males aged 65 years and older from 673 per 100,000 in 1999 to 538 per 100,000. *In Washington in 2004, the hip fracture rate for females age 65+ was 967.9 per 100,000 and 464.7 for males.*

Statement of the Problem:

Falls are the leading cause of injury-related hospitalizations in Washington State with over 17,000 hospitalizations in 2004. They were the third leading cause of injury-related death, with 540 deaths. Over two-thirds of the hospitalized falls in 2004 (11,615) were for adults age 65 and over, and 84% of fall-related deaths (456) were also to older adults.

Washington State's unintentional death rate from falls was 8.8 per 100,000 population in 2004, far exceeding the Healthy People 2010 goal of 2.9, and even exceeding the national baseline of 4.6 deaths per 100,000 in 1999. Washington's high death rate for falls is primarily due to the death rate from falls among older adults.

Although older adults are by far the population at greatest risk for unintentional falls, two other groups at risk for falls are children and workers. The National Institute for Occupational Safety and Health reports that falls are the second leading cause of occupational death, after motor vehicle crashes.

Falls Among Older Adults

Falls are a major health problem among the elderly. In the United States, one in three people aged 65 or more living in the community fall at least once a year. This proportion increases to one in two for those over 80 years. The severity of fall-related complications also increases with age.

With 11,615 hospitalizations of older adults due to falls in 2004, falls among older adults are by far the leading cause of injury hospitalizations in Washington State. The hospitalization rate for falls among adults age 65 and older increased 11% in Washington since 1994. While women have much higher rates of fall hospitalizations, men have higher rates of deaths due to falls. Falling has been found to be associated with subsequent admission to a nursing home.

The costs of health care associated with treating fall-related injuries and fractures are staggering. Nationally, the medical costs for treatment for falls in 2000 were estimated at \$26.9 billion, exceeding even the costs for treatment of motor vehicle crashes, estimated at \$14 billion. Although nationally falls accounted for 23% of all injuries in 2000, the cost for treatment of fall-related injuries accounted for 34% of the total medical costs of injuries, because falls are more likely to occur among older adults, which increases treatment costs.

Washington has one of the most rapidly aging populations in the country. Washington's population age 65 and over, estimated at 711,810 in 2005, is expected to reach 1.2 million by 2020. The population age 75 and over is expected to show the most rapid growth after 2015 when the Baby Boom generation has its impact.

The majority of falls among older adults results from a combination of factors. Contributing factors include: chronic health problems, physical and functional impairments, medications, hazards in the home and alcohol abuse. Osteoporosis, which is a widespread disease among older women, and which increases with prevalence as a person ages, greatly increases the chance a person who falls will suffer a hip fracture.

For persons aged 65 years and older, 60 percent of fatal falls occur in the home, 30 percent in public places, and 10 percent occur in health care institutions.

Effective Interventions

Many of the major risk factors for falling – such as balance impairment, muscle weakness, visual problems, polypharmacy and environmental hazards, are potentially modifiable.

The Centers for Medicare and Medicaid Services, as part of its Healthy Aging Project, commissioned the RAND Corporation to conduct an evidence-based systematic review of interventions in the prevention of falls. Findings from the RAND review include the following:

- There was a clear trend that a multifactorial falls risk assessment and management program was highly effective and appeared to be the most effective intervention. However, falls risk assessments must be coupled with individually-tailored follow up interventions to be effective. The most commonly assessed risks in such programs were medication review, vision, environmental hazards, and orthostatic blood pressure.
- Exercise was the next most effective intervention component.
- The best approach to preventing falls is likely to use both a multifactorial falls risk assessment and management program along with exercise.
- There was no evidence that environmental modification or education were effective as independent components.
- Successful falls prevention interventions have been delivered by a variety of providers, including exercise instructors, nurses, physical therapists, social workers and teams of multiple providers.
- Falls prevention programs, as a group, were shown to reduce the risk of experiencing a fall by 11% and a monthly rate of falling by 23%.
- While not conclusive, the evidence suggests that falls prevention programs provided to seniors have the potential to be highly cost-effective, compared with current practice.
- In the absence of new resources, it seems unlikely that much progress will be made in getting seniors to receive the benefits of falls prevention activities.

Recommended Strategies for Preventing Falls Among Older Adults from Injury Community Planning Group:

1. Increase multifactorial falls risk assessment and management programs that include individually-tailored follow up interventions.
2. Increase the availability of low cost, accessible exercise programs tailored for older adults that include strength, balance and mobility exercises.
3. Provide education to older adults on risk factors for falls and fall prevention strategies, in combination with exercise programs and assessments.
4. Conduct professional education for physicians on fall risk factor assessment and interventions.
5. Develop and implement comprehensive fall prevention interventions for people who are especially at risk, as defined in the American Geriatrics Society

guidelines. Fall prevention programs are particularly effective for high risk people.

6. Develop an infrastructure in communities statewide to enable implementation of comprehensive fall prevention programs. The infrastructure will include community partnerships which designate specific agencies to provide leadership on an ongoing basis which implement the listed strategies. Essential components of the infrastructure include programs for individuals who are at especially high risk of falling, as well as programs for older adults at lower risk, to keep them active, independent, and in the low-risk, falls-free category.

Childhood Falls

Even though the rate of falls among children is markedly lower than the rate for older adults, falls are still the leading cause of injury hospitalizations for Washington children ages 0-17. In 2004, there were 828 hospitalizations of children 0 – 17 years old. Data from 2000-2004 indicate that hospitalization rates due to falls among Washington children 0 – 17 years old are similar in every age group. Overall, male children had a hospitalization rate due to falls that is about two times higher than the rate for females.

The National Safe Kids Campaign reports that infants are at greater risk for falls associated with furniture, stairs and baby walkers; toddlers are at risk from window-related falls; and children through age 14 are at higher risk of playground equipment-related falls.

Recommended Strategies for Preventing Childhood Falls from Injury Community Planning Group:

1. Supervise young children when using a changing table or when children are on furniture.
2. Use stationary activity centers in place of baby walkers on wheels.
3. Use safety gates at the top and bottom of stairs.
4. Move chairs and furniture away from windows.
5. Install window guards that meet federal standards for emergency exits on windows.
6. Open double-hung windows from the top only.

7. Assure that playground surfaces are able to absorb the shock of falls by using materials such as shredded rubber wood chips and sand, and avoiding playgrounds with asphalt, concrete, grass and dirt surfaces.

Resources:

Washington State

1. Falls prevention strategies

Washington State Department of Health: Falls Among Older Adults: Strategies for Prevention <http://www.doh.wa.gov/cfh/Injury/pubs/FallsAmongOlderAdults.pdf>

2. Older Adult Community and Exercise Programs

Lifetime Fitness Program©

<http://depts.washington.edu/lfpro/>.

3. Washington State Department of Health Injury Prevention Program, Washington State Childhood Injury Report, 2004.

<http://www.doh.wa.gov/hsqa/emstrauma/injury/pubs/wscir/default.htm>

National

4. Falls Free: A National Falls Prevention Action Plan

<http://www.healthyagingprograms.org/content.asp?sectionid=98>

5. California Blueprint For Falls Prevention

http://www.archstone.org/publications2292/publications_show.htm?doc_id=246660

6. National Council on Aging's Center for Healthy Aging Evidence-Based Programs, Model Programs (and toolkits), and Best Practices

<http://www.healthyagingprograms.org/content.asp?sectionid=8>

7. National Council on Aging's Center for Healthy Aging Best Practices: Partnering to Promote Healthy Aging: Creative Best Practice Community Partnerships

<http://www.healthyagingprograms.org/content.asp?sectionid=31&ElementID=160>

Falls prevention web sites

8. CDC Falls Prevention page

<http://www.cdc.gov/ncipc/factsheets/falls.htm>

9. Links to Falls Prevention web sites

American Academy of Orthopaedic Surgeons
http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=439&topcategory=Injury%20Prevention

10. National Council on Aging, Fall Prevention Resources
<http://www.healthyagingprograms.com/content.asp?sectionid=69>
<http://www.healthyagingprograms.com/resources/Recommended%20Resources.pdf>

Falls brochures for older adults

10. CDC's "What YOU Can Do To Prevent Falls", and "Check For Safety: A Home Fall Prevention Checklist for Older Adults"
<http://www.cdc.gov/ncipc/pub-res/toolkit/brochures.htm>

11. Washington State Department of Health Injury & Violence Prevention Program, "Stay Active and Independent for Life – An Information Guide for Adults 65+"
<http://www.doh.wa.gov/hsqa/emstrauma/injury/pubs/SAILguide.pdf>

Articles/Publications

1. American Geriatrics Society, British Geriatrics Society and American Academy of Orthopaedic Surgeons Panel on Fall Prevention: Guideline for the prevention of falls in older persons. JAGS 49:664-672, 2001.

2. Washington State Department of Health publications: Falls Among Older Adults: Strategies for Prevention.
<http://www.doh.wa.gov/cfh/injury/pubs/FallsAmongOlderAdults.pdf>

3. Chang JT, et al, Interventions for the prevention of falls in older adults: Systematic review and meta-analysis of randomised clinical trials. BMJ, Vol 328:20, March, 2004.

4. Gardner MM, Robertson MC, Campbell AJ. Exercise in preventing falls and fall related injuries in older people: A review of randomized controlled trials. British Journal of Sports Medicine 2000; 4(1):7-17.

5. Healthy Aging Initiative Evidence Reports: Falls Prevention Interventions in the Medicare Population. Evidence Report/Technology Assessment. Prepared by the Southern California Evidence-based Practice Center, RAND, Baltimore, MD: US Department of Health and Human Services, Health Care Financing Administration, Sept 2003.

6. Tinetti ME, Speechley M, Ginter SF. Risk factors for falls among elderly persons living in the community. New England J Med 1988;319:1701-1707.

Reduce Fall-Related Injuries in Washington State

With these resources...

...we are able to implement these strategies/activities

...we are able to have these outputs...

...so that we achieve these outcomes for our citizens.

